



"Takes the Resistance out of Radio"

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THE FUTURE OF BROADCASTING

An Editorial by HUGO GERNSBACK

WHILE broadcasting started during the early 20th century, the idea of linking stations together by means of land lines such as telegraph or telephone wires did not come about until early in 1925. And not until 1926 was a commercial network attempted. The National Broadcasting Company, a pioneer in this field, this year is celebrating its 10th anniversary, commemorating the occasion of the first commercial network in 1926. While it was possible for a large audience to listen to a single station in 1924 and 1925, it was not possible for practically the entire country to listen-in to the President of the United States (as, for instance, the public did this year). Since that time, commercial broadcasting in this country has advanced by leaps and bounds, and it is now possible for the country's two largest networks to tie-up between them a total of 205 stations on a coast-to-coast hook-up whenever necessary. Considering the fact that there are now in use close to 25,000,000 radio sets in homes, plus 5,000,000 radio sets in automobiles, it becomes apparent that practically the entire country can easily be reached nowadays by a single speaker or a single broadcaster, whenever the necessity arises.

What of the future for broadcasting? Last month the National Broadcasting Company, in commemoration of its 10th birthday, tendered a dinner to some 1,600 men who had been active in the furtherance of radio broadcasting. The dinner was given at the Waldorf-Astoria in New York City, and a number of the speeches by radio luminaries and others were broadcast over the NBC network on a coast-to-coast hook-up.

In a notable address, David Sarnoff, President of the Radio Corporation of America, described the rise of broadcasting, and he, too, delved into the future of broadcasting. Noted for his conservatism, particularly when it comes to making predictions, Mr. Sarnoff electrified his audience by stating definitely that within the next 10 years broadcasting no longer would appeal to the ear only but that it would have sight, too—television, in other words. Coming from such a source, it behooves us to take the prediction most seriously. And it would be strange indeed if in 1946 we should not have television. The reason for this statement is simple.

Look back 10 years, and you will observe the very crude radio facilities that we had at that time. Our radio tubes, for instance, were still in the early development stage. We were still using headsets to a large extent, and loudspeakers of the old metallic horn type were then the rage. The dynamic speaker had not even been dreamed of. Practically all of the sets of that day had a fearful array of knobs and controls. Most of the sets had 3 dials and at least 2 other controls, and many of the sets had as many as 8 controls. The radio circuits for the radio receivers of that day were chiefly "tuned radio frequency." Such circuits as we use today, notably the superheterodyne, had, as yet, not made their practical appearance. But most important, we were still using batteries in great profusion, also "B" eliminators; and electric chargers of all types to recharge our storage batteries. The all-electric set was still in the dim future; short-wave programs from other lands were then fantastic predictions only indulged-in by dreamers. Moreover, all of the sets, with few exceptions were exceedingly noisy, and man-made static as well as natural static was often intense enough to make listening impossible.

All these are things of the past—things only dimly re-

membered but worthwhile to look back upon and to be used as a yardstick for what is to come in the next 10 years. Radio broadcasting today enters into every phase of our lives. We have radio receivers in almost every room from the pantry to the bathroom. The children have a set in their playroom, and they listen to the radio in their school. The busy executive has a set on his desk; and many cars are radio equipped. And, whether we are on a transatlantic steamer or a transcontinental train, or 10,000 ft. up in an airliner, the radio broadcast is always with us. In other words, there is no time when we are deprived of radio.

In the next 10 years, the personal radio receiver, that is, the pocket set or, as David Sarnoff predicted only a few months ago, the *wrist-watch radio receiver* will probably be a reality. Indeed, such a wrist-watch receiver can be built today, and it is only a matter of commercializing it during the next decade. The combination of television and sound receivers will, of course, open entirely new fields for radio broadcasting. You will hear and see at the same time the events which the radio broadcasters will present from hour to hour. *Indeed, it will be possible during the next 10 years to enjoy two programs at the same time whenever that becomes necessary.* Suppose, for instance, there is an important horse race at Miami, suppose also that at the same time there is being broadcast by another station or network an important symphony to which you wish to listen. It will then be possible merely to view the horse race, shutting off the sound part; while on the same set another wavelength (without "video" or vision facilities) can be tuned-in on the audio band, making it possible to enjoy two performances simultaneously. At present, television is usually in one color, either in a greenish tone or a black and white tone. At the end of the next 10 years, we will no doubt have television not only in its natural colors but most likely in *stereoptic* as well. In other words, the images will have depth.

The long-heralded *facsimile broadcasting* will probably also be an accomplished fact by the year 1946. It will be possible on your home radio set to receive photographs of the artists and even a small newspaper giving a digest of the day's news so that when you awaken in the morning the little newspaper will be ready so that it can be lifted right from your set. (The writer has illustrated and described this idea in past issues of *Radio-Craft*.) Our big networks will find it most profitable to provide such a service because it will not only maintain interest in radio, but the printed advertising word will also be transmitted, as, for instance, in the small newspaper, making it possible for you to receive it free of charge exactly as you receive sound broadcasting today, and as you will receive television in the future.

All this is, of course, possible under our American system of broadcasting where the individual is not taxed by a \$2.00 or higher monthly fee on his radio set, as is the case in European and other countries. The necessary amount of advertising to sustain the broadcasts will, of course, continue, in television. During the next 10 years tremendous strides will be made to make the advertising less blatant than it is today, and, rather than incense the listener or "viewer," more subtlety will be used to make whatever advertising there is more entertaining and less obtrusive.

And if you should happen to see these lines at the end of 1946 and find that, in the main, they have become actualities, you will begin to marvel at all the radio wonders that we, of today, did not even dream of.